EC-2000-007
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To: "'docket.oeca@epa.gov'" <docket.oeca@epamail.epa.gov>
cc:
Subject: (REVISED ~ FINAL REVISION) Intel Corporation Comments on EPA's CR OMERR (docket number EC-2000-007)



February 26, 2002

VIA Federal Express and Email

U.S Environmental Protection Agency
Enforcement and Compliance Docket
and Information Center (Mail Code 2201A)
Attn.: Docket Number EC-2000-007
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
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Re: Intel Corporation Comments on EPA's Cross-Media Electronic Reporting and Record Keeping Rule (66 Fed. Reg. 46162 (Aug. 31, 2001)) Docket Number EC-2000-007

Dear Sir or Madam:

Intel Corporation (Intel) submits the following comments on the U.S. Environmental Protection Agency's (EPA) proposed rule on Cross-Media Electronic Reporting and Record Keeping (CROMERRR) published in the federal register on August 31, 2001. 66 Fed. Reg. 46162-46195.

As set forth in the preamble, the purpose of CROMERRR is "to remove existing regulatory obstacles to electronic reporting and record keeping" and "establish requirements to assure that electronic documents and electronic records are-for all purposes-as valid and authentic as their paper counterparts." Id. at 46163. The proposed rule is intended to implement EPA's duties under the Government Paperwork Elimination Act (GPEA). 112 STAT. 2681-749, Public Law 105-277 (Oct. 21, 1998); 44 U.S.C. 3504. The GPEA requires that five years from the date of enactment, "[e]xecutive agencies provide--

(1) for the option of the electronic maintenance, submission, or disclosure of information, when practicable as a substitute for paper; and
(2) for the use and acceptance of electronic signatures, when practicable.

Public Law 105-277, Section 1704; 112 STAT. 2681-750. The GPEA further requires that "[e]lectronic records submitted or maintained in accordance with procedures developed under this title, or electronic signatures or other forms of electronic authentication used in accordance with such procedures, shall not be denied legal effect, validity, or enforceability because such records are in electronic form." Id. at Section 1707; 112 STAT. 2681-751. The stated goals for CROMERRR are:

* Reduce the cost for both the sender and recipient,
* Improve data quality by automating quality control functions and eliminating rekeying, and

* Greatly improve the speed and ease with which the data can be accessed by all who need to use it.

66 Fed. Reg. at 46163.

Intel supports these goals and acknowledges EPA's good intentions in developing CROMERRR. Intel would like to be able to submit required reports electronically to the EPA and the States. Intel strongly believes that electronic record keeping and reporting can result in a win-win for both EPA and the regulated community. Automation is more efficient, saving time and money. It can reduce the financial burden of compliance and streamline regulatory reporting while at the same time ensuring better data quality and quicker turnaround. Ultimately, it will also benefit the environment because it will improve the quality of data available and free up resources that can be used to improve environmental performance. Intel supports and encourages EPA to find ways to reasonably encourage electronic reporting and record keeping.

Unfortunately, CROMERRR uses overly broad definitions and incorporates onerous record keeping requirements that may actually discourage the use of automated systems to compute data for required reports. Moreover, the onerous nature of the record keeping requirements could discourage facility from updating inaccurate records. As such, Intel believes that the proposed rule will not achieve EPA's stated goals or meet EPA's obligations under the GPEA.

I. Current Situation at Intel

As a company, Intel has organized a sustained effort to completely build an e-Corporation front to back. Intel defines moving toward an e-Corporation as a corporate strategy to use a combination of business systems and Internet technologies to re-engineer and automate internal business processes in order to significantly improve customer, employee and supplier interactions. For the last four years, Intel has established goals in order to ensure this result. In 1999, the focus was on connecting all of Intel's direct customers to make it easier to get information and order products. Intel met that goal. In 2000, the goal was to connect Intel's direct materials suppliers and generate 80 percent of our e-Procurement online. Intel achieved that objective. In addition, in 2000, $31.4 billion of the corporate revenue was through e-Commerce transactions (>90%). In 2001, Intel focused on connecting more than 15,000 indirect suppliers, like office equipment suppliers, with a goal of moving 70 percent of transactions to the Internet.

This e-Corporation focus also applies to Intel's environmental record keeping. Like many other large manufacturing facilities, Intel uses a variety of electronic records (databases, automated chart recorders, supervisory systems, excel spreadsheets, etc.) during the process of calculating environmental emissions and producing federal, state or local agency-required public reports. To illustrate Intel's extensive reliance on multiple electronic records sources, we have outlined below an abbreviated sequence of steps that are required to calculate air emissions from a typical manufacturing operation.

1. An environmental engineer would retrieve electronic and/or paper records from several different sources (e.g. chemical purchasing records from an electronic database from our purchasing dept, diesel fuel from paper invoice copies from our operations dept, natural gas from an electronic

facility control system report, and production units from a manufacturing database report, etc.).
2. The engineer would then convert the raw data from these various systems to a unit of mass by obtaining container size, specific gravity, or other conversion factors. These conversion calculations may or may not be contained in the same spreadsheet/database used in step 3 below.
3. The engineer would then use the converted chemical consumption data in an excel spreadsheet or other database that has conversion factors to calculate air emissions from mass usage data.
4. Extensive quality control checks would be completed in order to ensure the data used in the computations is correct. For example, the engineer might obtain a report off the web to crosscheck chemical consumption data or use an electronic MSDS to verify specific gravity of certain chemicals.
All of this input would eventually produce the final calculated air emission information for this facility. When the engineer fills out the report for the agency, the final calculated emissions would be the result that was computed from obtaining data from all these various electronic and/or paper record data sources.

Because Intel currently makes extensive use of electronic records, both to calculate emissions and develop reports, Intel is most concerned about the potential impact of CROMERRR on those existing records and the implications the rule has for the development of future record keeping and reporting systems. In addition, Intel shares many of the specific concerns expressed in the comments of the Coalition for Effective Environmental Information submitted under a separate cover. Some of those concerns are addressed briefly below.

II. Concerns with CROMERR

A. CROMERRR is inconsistent with intent and language of GPEA

CROMERRR is not consistent with the GPEA. The GPEA requires agencies to remove obstacles to electronic record keeping. Public Law 105-277, Section 1707; 112 STAT. 2681-751. However, as written, CROMERRR will actually create barriers to existing and future electronic record keeping. Many of the existing record keeping software (Excel, etc.) do not meet the requirements of CROMERRR. CROMERRR will require development and de-bugging of new software, the purchase and installation of this software, and retraining of employees on the new software.

The GPEA also does not mandate that EPA resolve the anti-fraud or record retention concerns addressed in CROMERRR by 2003. All that the GPEA requires EPA to enable by 2003 is the "option of the electronic maintenance, submission, or disclosure of information, where practicable" and the "use and acceptance of electronic signatures, where practicable." Public Law 105-277, Section 1704; 112 STAT. 2681-750. Intel believes that the issues that EPA is wrestling with in CROMERRR, particularly the record retention requirements, are complex and need to be fully evaluated. Electronic record keeping and reporting technologies are changing constantly and EPA needs to ensure that CROMERRR encourages innovation while protecting the validity of existing records and the authenticity of information submitted in electronic reports. Intel believes these issues can, and should be worked on over time. At this stage, CROMERRR should be a simple enabling rule that allows the use of electronic record keeping and encourages the use of electronic reporting, wherever practical.

B. Fraud concerns can be addressed in other ways

Intel is concerned with EPA's attempt to address concerns with fraud in CROMERRR. As noted above, this is a complex issue that needs to balance the agency's justified concerns about accuracy with the potential benefits of widespread use of electronic record keeping and reporting. As noted in EPA's stated goals, the purposes of CROMERRR are "reduced cost," "improved data quality" and "increased speed and ease at which data can be accessed." The achievement of these goals rests on companies actually using the electronic record keeping and reporting processed covered by CROMERRR. As noted in these comments, even for a technology company like Intel, implementation of CROMERRR would be very difficult.

While Intel recognizes that fraud in electronic records and reports is a significant concern, Intel believes the proposed rule goes well beyond what is necessary to address the perceived problem. Electronic records should be allowed if they could be demonstrated to be accurate. CROMERRR essentially requires that companies guarantee that their record keeping systems will maintain accurate records before they can keep electronic records, even if they are using electronic means to generate and maintain records today, and there has never been any question of their accuracy. Electronic records should be subject to the same levels scrutiny as paper records. The same should be the case for electronic reports. The requirements for e-signatures should not exceed the requirements for hand signatures. The same laws that prohibit fraud or forgery in signatures on documents should also apply to e-signatures. Expanded certifications are not necessary to protect the validity of the information in the electronic reports.

C. Record keeping provisions would create significant problems

1. Record keeping provisions of CROMERRR could require a complete overhaul of existing record keeping systems

The preamble to the proposed rule states that "the choice of using electronic rather than paper for future reports and records will remain purely voluntary." 66 Fed. Reg. at 46163. However, because electronic record keeping already is widely in use, this statement is not actually true. It retroactively regulates processes that have developed over time. It forces companies like Intel to either upgrade their record keeping systems to meet the requirements of CROMERRR or stop using those record keeping systems. Of course, not using those systems is not usually an option.

Intel's existing computer systems were not designed to meet EPA's record keeping requirements set forth in the proposed rules. Meeting these new criteria likely would require an immediate substantive overhaul of thousands of Intel's computers, including distributed control systems that record surrogate environmental parameters such as pH, flow, pressure, and temperature. It would even impact spreadsheet and document software used to summarize monthly emissions data or to prepare reports.

Moreover, some record keeping requirements do not require creation of a specific record, but only maintenance of data that have the necessary information. For example, air quality rules to control volatile organic compounds (VOCs) often require companies to maintain a list of chemicals

used that generate VOCs. Most companies use their chemical purchasing records to meet this requirement. As proposed, CROMERRR would subject those records to all the applicable record keeping requirements. As such, CROMERRR could force these companies to prepare a new record (that is not required today) in order to avoid having to make the underlying data meet the CROMERRR record keeping requirements. Thus, CROMERRR could actually unnecessarily "increase" company record keeping burdens, not lessen them.

2. Rule needs to narrow the definition of an "electronic record" and clarify what "records" are subject to the record keeping requirements of this rule.

The definition of the term "electronic record" is so broad that it encompasses essentially any data that has ever passed through a computer. Computers have been used extensively at Intel and other companies to keep business and environmental data over the past 20 to 30 years. Because the record keeping requirements of this rule could apply to these record keeping systems, this rule, could significantly disrupt that use of computers. If promulgated, the rule could invalidate most environmental record keeping systems.

EPA needs to clarify whether all of the electronic "records" maintained on a computer would be subject to the requirements of CROMERRR or whether just the final piece of data used in preparing an electronic report is encompassed by the rule. As proposed, CROMERRR could be read to require that the underlying data comply with the record keeping requirements. If all of the data used to calculate the final output is included in the scope of the rule, that would imply that all of the different databases with information that is used to compute data needed for federal, state or local agency-required public reports is subject to the time-stamp, audit trail, and other requirements outlined in CROMERRR. Because environmental reports often rely ultimately on chemical purchases, this would have implications not only for Intel's environmental records, but also Intel's chemical purchasing records. As noted above, in conjunction with Intel's goal to be a 100% e-Corporation, Intel has shifted almost all of this purchasing to an electronic database. For business reasons, Intel is confident this database is very accurate. However, without a detailed review, Intel cannot ensure that it incorporates all the time-stamp, audit trail, and other requirements from CROMERRR. Accordingly, Intel recommends that the CROMERRR record keeping requirements, if adopted as proposed, only apply to the final document submitted to EPA. The data obtained from myriad databases, such as the chemical purchase database, to create the final EPA document should not be subject to CROMERRR.

Currently, EPA has the option to audit the basis behind paper reports. Facilities need to adequately show the agency the calculation methods. Records that are input into electronic reports should be subject to the same regulatory requirements as the records that are used to create paper reports. In either case, the facility should be required to show how the numbers were derived and therefore, maintain proper documentation, but time-stamps, audit trails etc. should not be required.

3. EPA needs to clarify that electronic records are allowed under current regulations

EPA also needs to correct passing statements in the proposed CROMERRR that suggest that electronic records currently are not allowed. See, e.g., 66 Fed. Reg. 46169 ("EPA is proposing today a set of criteria that will have to be met by regulated entities that maintain electronic

records in lieu of paper records, to satisfy record keeping requirements under EPA regulations in Title 40 of the CFR. The proposed criteria address the minimal functional capabilities that an electronic record-retention system must possess in order for an electronic record or document to meet a federal record-keeping requirement.") (Emphasis added).

In the final rule, EPA needs to clarify the legal requirements for keeping electronic records currently. Most environmental rules are silent on electronic reporting and have been read to allow electronic records. Many states allow the use of electronic records and some are working on developing systems to allow electronic reporting. Intel believes that EPA cannot change this position without adequate notice and comment and an opportunity to revise existing record keeping systems. EPA should clarify that electronic records are allowed unless paper record keeping is explicitly mandated by an underlying EPA regulation.

4. EPA needs to develop a more reasonable record keeping strategy that balances the need for authentification with the existing ability of record keeping systems to provide the security demanded

The development of specific changes to record keeping requirements needs additional thought and time. Such changes are not required by the GPEA, and are likely to cause significant disruption to the use of existing record keeping systems. EPA needs to develop a more reasonable record keeping strategy that balances the need for authentification with the existing ability of record keeping systems to provide the security demanded by EPA.

In the short term, Intel recommends that EPA separate the record keeping requirements from CROMERRR and work with companies to understand better how such records are maintained today so that whatever system is developed will minimize disruption to existing record keeping systems and provide for an orderly transition to a system that will achieve EPA's goals. In so doing, Intel recommends that EPA review its record keeping requirements in Title 40 of the Code of Federal Regulations. EPA should determine whether existing record retention periods are necessary in light of the record's purpose and shorten those requirements, where possible. EPA then should consider other options to achieve the security it requires. For example, for records that need to be retained over five years, EPA should give companies the option to either (i) retain record and take on transitions to new computer systems or (ii) provide the record to the appropriate government agency (federal, state, or local) and allow that agency to keep an archive of the record.

D. In any event, EPA needs to provide additional time to implement changes to record keeping requirements

Another concern that Intel has with CROMERRR is the time provided by EPA to implement the changes contemplated by the rule. Any change in record keeping requirements at a company the size of Intel is an enormous task. As a multinational, Intel strives to maintain record keeping systems consistent throughout the company so that it can review progress against environmental goals for the entire company. Therefore, any changes to record keeping that would be required by CROMERRR would have to be reviewed and implemented not just at our facilities in the United States, but throughout the entire company.

Accordingly, in order to implement CROMERRR initially, Intel would need an implementation period of at least one to two years. This is because the update of our record keeping systems would involve multiple steps:

1. Intel would need to evaluate all of its current systems and have a detailed understanding of the requirements.
2. Intel would write up all of the future requirement documentation.
3. Assuming that the software to meet the requirements is available, Intel would evaluate a variety of off the shelf systems. Intel would also evaluate the ability and cost of programming in house or using a consulting company to code.
4. The system would then be tested and debugged.
5. Employees worldwide would be trained on the new system before implementation.

If appropriate software is not available "off the shelf," additional time would be needed to allow for writing and debugging appropriate software. For any "major changes" to the record keeping system, a similar amount of time would be required depending on the nature of the change and the availability of appropriate software.

## III. Summary

Intel strongly supports electronic record keeping and reporting. Electronic record keeping and reporting allows for automation, which is more efficient, saving both time and money. At the same time, it can ensure better data quality and quicker turnaround. Unfortunately, Intel does not believe CROMERRR would achieve EPA's goals, nor will CROMERRR comply with EPA's obligations under the GPEA. This is because CROMERRR incorporates an overly broad definition of an "electronic record," cumbersome anti-fraud provisions, and onerous record keeping requirements that will likely discourage the very electronic record keeping and reporting the rule ostensibly is intended to facilitate. Accordingly, Intel recommends that EPA finalize only those portions of CROMERRR necessary to implement the GPEA. The GPEA does not require anti-fraud or record keeping requirements in CROMERRR. Intel believes EPA should take more time to obtain stakeholder input before implementing the anti-fraud or record keeping requirements.

If you have any questions about these comments, or require additional information, please contact Rachel Sheinbein at (480) 554-9025.

Sincerely,

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